Fuzzy Aggregating Functions For Multiobjective VLSI Placement

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Summary

When fuzzy logic is used with multi-objective optimization, min/max operators may not be desirable. This is primarily due to the lack of compensation/submission of min/max. To overcome this, ordered weighted averaging (OWA) operators were proposed by R.R. Yager (1988). OWA requires the selection of a control parameter , which is different for different problem instances. In this paper, we propose new fuzzy aggregating functions that simulate the fuzzy AND/OR logic and that have the advantages of OWA without the need of any control parameter. A comparison with OWA for VLSI cell placement using simulated evolution produced encouraging results